

ABSTRACT

An external cavity laser and method for selectively emitting light based on wavelength utilizes a focusing diffractive optical element (DOE) that has been corrected for spherical aberration. The use of the aberration-corrected focusing DOE narrows the cavity spectral response of the external cavity laser, which enables single wavelength/mode lasing and suppresses mode hopping. The aberration-corrected focusing DOE may be transmissive or reflective, depending on the configuration of the external cavity laser.